

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A hematocrit sensor comprising:

a blood circuit having two ends;

a blood purifier connected to said blood circuit between said two ends and configured to purify blood that is being circulated extracorporeally in said blood circuit; and

a sensor connected to said blood circuit and configured to measure hematocrit values, the sensor including

a housing connected to a portion of said blood circuit,

a slot provided with said housing,

~~one of~~ a slit ~~or a plurality of pores~~ included in said slot of said housing,

and

a light emission device and a single light reception device provided with said housing such that both said light emission device and said single light reception device are in optical connection with each other and positioned to face said blood circuit through either said slit ~~or said plurality of pores, respectively.~~

2. (Previously Presented) The hematocrit sensor of claim 1, further comprising a cover provided at said housing, which covers said slot when said cover is closed.

3. (Previously Presented) The hematocrit sensor of claim 1, further comprising a cover provided at said housing, which swings open against said housing and uncovers said slot when said cover is opened.

4. (Previously Presented) The hematocrit sensor of claim 2, further comprising a holding device configured to hold the cover in place when the slot is covered.

5. (Previously Presented) The hematocrit sensor of claim 2, further comprising a detection device configured to detect at least one of whether said blood circuit is in said slot, and whether said cover is closed.

6. (Previously Presented) The hematocrit sensor of claim 1, wherein said blood purifier configured to perform dialysis treatment.

7. (Previously Presented) The hematocrit sensor of claim 6, further comprising an ultrafiltration pump, a substitution fluid, and a dialyzing fluid.

8. (Original) The hematocrit sensor of claim 1, further comprising a drip chamber connected to said blood circuit.

9. (Previously Presented) The hematocrit sensor of claim 8, wherein said hematocrit sensor is provided with a fixing device at said housing of said sensor to fix said drip chamber.

10. (Previously Presented) The hematocrit sensor of claim 1, further comprising an air bubble detector provided with said housing of said sensor and connected to said blood circuit.

11. (Previously Presented) The hematocrit sensor of claim 1, further comprising a blood detector connected to said blood circuit and configured to detect a presence of blood in said blood circuit.

12. (Original) The hematocrit sensor of claim 1, wherein said slit has an adjustable width.

13. (Previously Presented) The hematocrit sensor of claim 1, wherein at least one of said plurality of pores has an adjustable diameter.

14. (Currently Amended) A method of measuring hematocrit values, comprising:
providing a sensor connected to a blood circuit, said sensor having a slot with either a slit or a plurality of pores, and said sensor including a light emission device and a single light reception device, both of which are in optical connection with each other and positioned to face said blood circuit through either said slit or said plurality of pores;

emitting light from said light emission device toward blood flowing through said blood circuit;

receiving said light at said single light reception device, said light being emitted from said light emission device and being reflected from said blood flowing through said blood circuit;

determining a light absorption received by said single light reception device; and
calculating hematocrit values based on a strength of said light absorption determined by said
determining..

15. (Previously Presented) The method of claim 14, wherein:

 said light emission device emits light intermittently; and

 said hematocrit values calculated in said calculating are corrected based on a strength of an
ambient light received by said single light reception device when said light emission device does not
emit said light.

16. (Previously Presented) The method of claim 14, wherein said hematocrit values
calculated in said calculating are corrected to compensate an error based on a flow rate of said blood
flowing through said blood circuit.

17. (Previously Presented) The method of claim 15, wherein said hematocrit values
calculated in said calculating are corrected to compensate an error based on a flow rate of said blood
flowing through said blood circuit.

18. (Previously Presented) The method of claim 14, further comprising:

 detecting a presence of said blood flowing through said blood circuit, wherein the
calculating starts calculating a first of said hematocrit values at a time said detecting first detects
said presence of said blood.

19. (Currently Amended) A hematocrit sensor comprising:

a blood circuit having two ends;

a blood purifier connected to the blood circuit between the two ends and configured to purify blood that is being circulated extracorporeally in the blood circuit; and

a sensor connected to the blood circuit and configured to measure hematocrit values, the sensor including

a housing connected to a portion of the blood circuit,

a slot provided with the housing,

~~one of a slit or a plurality of pores included~~ in the slot of the housing, and

a single light emission device and a single light reception device both provided with the housing and configured to be in optical connection with each other and positioned to face the blood circuit through ~~either~~ the slit or the plurality of pores, respectively.